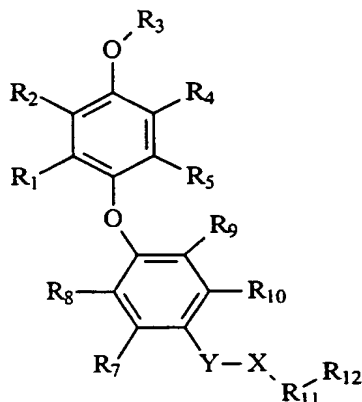


What is claimed is:

1. A compound characterized by the structure:



and pharmaceutically acceptable salts, hydrates, and biohydrolyzable amides, esters, and imides thereof, wherein:

$R_1$ ,  $R_2$ ,  $R_5$ ,  $R_7$ , and  $R_{10}$  are each, independently, selected from the group consisting of hydrogen, halogen, alkyl, alkenyl, alkynyl, heteroalkyl, heteroalkenyl, and heteroalkynyl;

$R_4$  is selected from the group consisting of halogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, arylalkyl, heteroalkyl, heteroalkenyl, heteroalkynyl, heterocycloalkyl, heterocycloalkenyl, heteroaryl, heteroarylalkyl, and heteroarylalkenyl; with the proviso that when  $R_2$  is hydrogen, Y is  $-\text{CH}_2\text{CHK}_1$ , X is selected from the group consisting of  $-\text{NZ}-$  and  $-\text{NH}-$ , and  $R_{12}$  is  $\text{C}_1 - \text{C}_4$  alkyl, wherein  $K_1$  is selected from the group consisting of hydrogen and  $\text{C}_1 - \text{C}_4$  alkyl and Z is  $\text{C}_1 - \text{C}_4$  alkyl, then  $R_4$  is not arylalkyl;

$R_8$  and  $R_9$  are each, independently, selected from the group consisting of hydrogen, halogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, arylalkyl, heteroalkyl, heteroalkenyl, heteroalkynyl, heterocycloalkyl, heterocycloalkenyl, heteroaryl, heteroarylalkyl, and heteroarylalkenyl; with the proviso that at least one of  $R_8$  and  $R_9$  is not hydrogen;

$R_3$  is selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, arylalkyl, heteroalkyl, heteroalkenyl,

heteroalkynyl, heterocycloalkyl, heterocycloalkenyl, heteroaryl, heteroarylalkyl and heteroarylalkenyl;

Y is selected from the group consisting of bond, alkyl, alkenyl, alkynyl, heteroalkyl, heteroalkenyl, and heteroalkynyl;

X is selected from the group consisting of -NZ-, -NH-, and -O-;

R<sub>11</sub> is selected from the group consisting of bond and -C(O)-; with the provisos that when Y is bond and X is -O- then R<sub>11</sub> is -C(O)-; and when Y is alkyl and X is -O- then R<sub>11</sub> is not -C(O)-;

R<sub>12</sub> is selected from the group consisting of alkyl, alkenyl, alkynyl, heteroalkyl, heteroalkenyl, heteroalkynyl, cycloalkyl, cycloalkenyl, heterocycloalkyl, heterocycloalkenyl, aryl, arylalkyl, heteroaryl, heteroarylalkyl, and heteroarylalkenyl; with the provisos that when R<sub>11</sub> is bond, then R<sub>12</sub> and Z are optionally bonded together to form a cycle selected from the group consisting of cycloalkyl, cycloalkenyl, heterocycloalkyl, heterocycloalkenyl, aryl, and heteroaryl; when R<sub>12</sub> is heteroalkyl, heteroalkenyl, heteroalkynyl, heterocycloalkyl, heterocycloalkenyl, heteroaryl, heteroarylalkyl, or heteroarylalkenyl, then a heteroatom of R<sub>12</sub> is not directly covalently bonded to R<sub>11</sub>; when Y is bond or hydroxy-substituted ethyl, X is -NH-, and R<sub>11</sub> is bond, then R<sub>12</sub> is not methyl; and when Y is bond, X is -O-, and R<sub>11</sub> is -C(O)- then R<sub>12</sub> is not aryl; and

Z is selected from the group consisting of alkyl, alkenyl, alkynyl, heteroalkyl, heteroalkenyl, and heteroalkynyl; with the proviso that when R<sub>11</sub> is bond, then R<sub>12</sub> and Z are optionally bonded together to form a cycle selected from the group consisting of cycloalkyl, cycloalkenyl, heterocycloalkyl, heterocycloalkenyl, aryl, and heteroaryl.

2. A compound according to Claim 1 wherein X is selected from the group consisting of -NZ- and -NH-; with the proviso that each of R<sub>8</sub> and R<sub>9</sub> is not hydrogen.

3. A compound according to any of the preceding claims wherein Y is bond.

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4. A compound according to any of the preceding claims wherein  $R_4$ ,  $R_8$ , and  $R_9$  are each, independently, selected from the group consisting of halogen, alkyl, alkenyl, and heteroalkyl; and wherein  $R_3$  is selected from hydrogen, lower alkyl, and lower alkenyl.

5. A compound according to any of the preceding claims wherein  $R_{12}$  is selected from the group consisting of alkyl, heteroalkyl, arylalkyl, and heteroarylalkyl; with the proviso that when  $R_{11}$  is bond, then  $R_{12}$  and Z are optionally bonded together to form a cycle selected from the group consisting of cycloalkyl, cycloalkenyl, heterocycloalkyl, heterocycloalkenyl, aryl, and heteroaryl.

6. A compound according to any of the preceding claims wherein  $R_1$ ,  $R_2$ ,  $R_5$ ,  $R_7$ , and  $R_{10}$  are each hydrogen.

7. A composition characterized by a compound according to any of the preceding claims and a carrier.

8. A method of treating hair loss comprising administering to a mammal a composition according to claim 7.

9. A method according to 8 wherein the administration is topical.

10. A method according to any of claims 8 and 9, wherein the composition further comprises minoxidil.